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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,592	01/18/2001	Jang Sung Chun	3687-0101P	4664

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EXAMINER

ADDISON, KAREN B

ART UNIT PAPER NUMBER

2834

DATE MAILED: 05/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/761,592

Applicant(s)

CHUN ET AL.

Examiner

Karen B Addison

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) \_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☒ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "the rotor include a first to a third shafts" is vague and indefinite.

3. Claim 6 recites the limitation "the vertical direction" in line 3 or the paragraph.

There is insufficient antecedent basis for this limitation in the claim.

4. Claim 1 recites the limitation "the inner side the outer case" in line 3 or the paragraph. There is insufficient antecedent basis for this limitation in the claim.

5. Claim 1 recites the limitation "the inner side of the first and second armature coil" in line 7 or the paragraph. There is insufficient antecedent basis for this limitation in the claim.

6. Claim 3 recites the limitation "the perpendicular direction" in line 3 or the paragraph.

There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA (applicant prior art) in view of Hammer (5093596).

APA substantially teaches the claim invention except that it does not show a rotor having a first to a third shaft and a first and second permanent magnet part. APA does not disclose a third shaft having a neutral zone and ring type permanent magnet.

Hammer discloses in fig. 1 a linear motor including a rotor having a first to a third shaft having (102,101,150) where in the third shaft has a neutral zone (150) having a predetermined interval between the first and second permanent magnet. For the purpose of linear and rotational movement of the shaft. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the rotor of APA with the combined linear – rotary motor of Hammer for the purpose of providing unrestricted rotary motion and stepped linear motion over a predefined range.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view as applied to claims 1-4 above, and further in view of Sekiyama (6236124).

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As disclosed in the above paragraph (7), APA discloses the claim invention and Hammer discloses a rotor having a first to third shaft. However, neither APA nor Hammer disclose a first permanent magnet arranged in a ring type configuration.

Sekiyama discloses in fig.8 and 9 an linear comprising ring type permanent magnets (2b1-2b7) on the outer circumferential surface of the shaft. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the linear motor of APA and Hammer with the ring type permanent magnets of Sekiyama for the purpose of allowing the moving member to move with thrust sufficiently greater than conventional linear motor.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen B Addison whose telephone number is 703-306-5855. The examiner can normally be reached on 8:00 to 4:30.

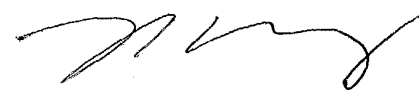
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1317. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

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KBA  
May 8, 2002



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